

WITHIN OUR BORDERS

Metallurgy Course
Trans-Canada Highway
Laboratory Technicians' Course

Wolf Bounties
Cow Replacements
Water Safety Demonstration

VOL 5

JULY 15, 1952

No. 3

Lab Technicians' Course Planned For Fall At Calgary

In answer to requests from Alberta industry, the Provincial Institute of Technology and Art is planning an eight-month course for laboratory technicians this fall.

The industrial development of the Province has been so rapid that a large demand for laboratory personnel has arisen. Petrochemical plants which are beginning to spring up in all parts of Alberta require seven or eight laboratory technicians for each chemist or chemical engineer employed in their laboratories. At present, there is no training of laboratory technicians provided in Alberta and the new chemical industries must use unskilled Alberta workers or trained technicians from other provinces.

The course will consist of studies in industrial chemistry, laboratory techniques, chemical calculations, chemical instrumentation, and the writing of scientific reports. Half the time of the course will be spent in the laboratory. The industrial chemistry studies will deal with chemical procedures referring to process control and plant equipment.

An extensive survey of employment possibilities for laboratory technicians has been made and jobs at attractive rates of pay will be available at the Canadian Chemical Company plant at Edmonton; the Canadian Industries Limited polythene plant at Edmonton; and the Calgary petroleum refineries. Job openings are also being scouted at the Consolidated Mining and Smelting Company of Canada Ltd. plants at Calgary and Trail and Canadian Gulf Oil Company's chemical development at Pincher Creek.

Requirements for the course are Grade 11 with chemistry and physics options, although preference will be given to students with Grade 12 and chemistry and physics options. Applications for the course should be submitted to the Provincial Institute of Technology and Art, Calgary.

Evening Classes In Metallurgy Offered Calgary Welders

An evening class in welding metallurgy and materials testing for Alberta welders will be held from 7:30 to 9:30 p.m. Tuesday, July 15, and Thursdays from October 21 to December 11, at the Provincial Institute of Technology and Art, Calgary.

The course, which will cost \$15, is mainly a demonstration course with the minimum of lectures. It will cover the testing of materials for tensile strength, yield point, elasticity, ductility, hardness, toughness, fatigue resistance, rigidity, weldability, hardenability, machinability and also the standard bending tests used by welding inspectors.

There will be demonstrations on the effect of heat treating and cold working on the grain structure and physical properties of metals. The effect of carbon content and alloys on the properties of steel will also be demonstrated.

The testing equipment used includes a 60,000 pound universal testing machine, Brinell and Rockwell hardness testers, Izod impact tester, fatigue tester, and metallurgical microscopes. Students will participate in preparing test specimens and in making tests.

Further information and applications for the course may be obtained from the Director of Evening Classes, Provincial Institute of Technology and Art, Calgary. Instructors of the course are O. Kingsep, Head of the Machine Shop Department at the Institute; W. A. B. Saunders, Head of the Aeronautics Department, and W. J. Stayura, District Representative of the Development and Engineering Department, Canadian Liquid Air Co. Ltd.

'Tech' Diesel Course Trains Railroadmen

Approximately 75 employees of the Canadian Pacific Railway have been trained in diesel maintenance work during the past three years by an evening course at the Provincial Institute of Technology and Art.

The course covers 72 hours of instruction. Theory is given on Monday evenings and then the class is divided into two groups, one which takes practical work Wednesday evening and the other on Thursday evening. Each student puts in four hours a week.

Tartary Buckwheat Now No. Weed

Alberta farmers are finding a new "number one" annual weed pest in Tartary Buckwheat. This weed is particularly widespread in the area from Red Deer to the St. Paul-Bonnyville Region.

Because of characteristics similar in many ways to those of wild oats, tartary buckwheat is difficult to control when cereal crops are grown. The usual annual weed control practices of summerfallowing, late seeding of Olli barley with fertilizer, and post-seeding cultivation are, to date, the best known methods of controlling tartary buckwheat.



If your canoe overturns, stay with it—it'll support the weight of two men even though submerged! That was one of the maxims of canoe safety demonstrated at Seba Beach July 1 by Bob Bishop, Water Safety Director for the Alberta Branch of the Canadian Red Cross Society, and four members of the Voyageur Canoe Club of Edmonton. In this photo, Barry Mawson (in the bow) and Alan Crumb are shown paddling a totally submerged canoe.

302 Miles In Alberta

Alberta Section Of Trans-Canada Highway

Alberta's section of the long awaited Trans-Canada Highway is rapidly becoming a reality as crews complete road work, overpasses, bridges and asphalt work at numerous points along the route.

A total of 302 miles between Dunmore and the Banff Park gate is the joint responsibility of the Alberta and federal governments, while the remaining 60 miles in Banff National Park is being constructed by the federal government. The whole highway from Atlantic to Pacific is expected to be completed by 1956 and will cross 4,856 miles of mountains, prairies and bushland.

In Alberta, the dirt work on the major section between the Saskatchewan border and Bassano is expected to be completed by the end of the year, while much hardsurfacing already has been completed near Gleichen. The main bridge on the route is a modern 1,000-foot span which will cross the South Saskatchewan River at Medicine Hat. This bridge will be opened late in 1953.

Route of Highway

The Trans-Canada Highway enters Alberta from the east at Walsh and passes Medicine Hat, Redcliff, Brooks, Bassano, Gleichen, Strathmore, Calgary and Banff, roughly following the route of the present Highway No. 1. The new highway will mean the construction of numerous new bridges, overpasses and grade separations to eliminate any possibility of congestion, as well as straightening the old highway route.

Highway No. 1 has been revised between Walsh and Medicine Hat to improve the alignment and to eliminate unnecessary curves, while a completely new route has been plotted between Medicine Hat and Bassano. From Chestermere Lake to Calgary there have been numerous revisions in the route and a new approach to the city has been approved.

Survey work has not been completed between Calgary and the Banff National Park entrance, but several revisions are expected to be made in the present route.

First Proposal in 1916

The first proposal for a Trans-Canada Highway was made in 1916, when a reconnaissance survey was made to determine the best route across the nation. Following the First Great War, an engineering report was made to the federal government on the possibility of construction of the Trans-Canada Highway as a post war project.

In that year the Canada Highways Act was passed, allowing the federal government to make a total contribution of \$20,000,000 to provincial governments for road construction. The best routes for the highway were defined between 1936 and 1941 but the outbreak of the Second Great War postponed any immediate development of the plans.

Dominion-Provincial Conference

In 1948, a Dominion-Provincial conference on Trans-Canada Highways was held in Ottawa. Through this meeting, agreements were made for the actual construction of the highway. In the following year, a second conference considered the technical aspects of the highway and eight of the present 10 provinces, including Alberta, signed an agreement with the federal government.

The agreement states that the actual cost of construction will be shared on a 50-50 basis between the federal and provincial governments, while the full cost of office work—calling for tenders, etc.—and maintenance work will be undertaken solely by the provinces. In sections where the Trans-Canada Highway passes through National Parks, the cost of construction will be borne solely by the federal government.

In Alberta, the highway will pass through Banff National Park, thus making the 60 miles from the park boundary to the British Columbia border a federal responsibility.

Specifications of Highway

During the conferences, specifications were set for the size of the highway, bridges and shoulders. The minimum width for the pavement is 22 feet while the maximum is 24 feet. Shoulders must be between five and 10 feet wide, while the minimum sizes for bridges has been divided into three categories. Bridges 30 feet or less must allow for the full width of the highway and shoulders; bridges between 30 and 100 feet must allow at least 27 feet between curbs; and bridges over 100 feet in length must be at least 24 feet wide.

The Alberta portion of the Trans-Canada Highway will use the maximum widths for the road—24-foot blacktop and 10-foot road mix shoulders—and exceed the minimum standard for bridges in all cases.

The highway has a nine-inch stabilized base and a three-inch hot plant mix surface. A special feature is the hard-surfacing from the blacktop to the fenceline of roads entering the highway. This will allow most vehicles to shake loose any mud before entering the main stream of traffic.

Five Contracts Carried Over

Five contracts on the highway between Calgary and the Saskatchewan border are left from last year. Most contractors had difficulty completing their 1951 work because of adverse weather conditions. These contracts are: Completion of sub-grade construction from Dunmore to Suffield, Suffield to Brooks, Brooks to Bassano, and Gleichen corner to Strathmore; completion of sub-grade construction and asphalt surfacing Bassano to Gleichen corner.

In addition, work will start on asphalt surfacing from Gleichen corner to Strathmore, sub-grade work from Chestermere Lake to Calgary and Dunmore to the Saskatchewan border.

The new route will pass through the relatively undeveloped south-west section of Medicine Hat, crossing the South Saskatchewan River on the western outskirts of the city. Work has started on the 1,000-foot long bridge which will accommodate two wide traffic lanes and one pedestrian walk.

Overpasses Near 'Hat

The construction of the new route through Medicine Hat also necessitated the building of a concrete overpass over the railway at Dunmore and another near Redcliff. Grade separations are under construction over Highway No. 3 on the western outskirts of Medicine Hat and another near Redcliff, crossing the old Highway No. 1.

In addition, two large culverts have been built over Seven Persons Creek and a concrete bridge east of Medicine Hat spans Bullshead Creek.

Bridge Work to Start

Work will get underway this season on three bridges between Dunmore and Walsh, two bridges near Brooks and Bassano crossing the Bantry and Springhill canals, and numerous concrete box cattle passes and culverts.

On the approach to Calgary, the highway will be re-routed past Chestermere Lake and will pass north of the present Highway No. 1. It will approach Calgary on 16th Ave. N.E., and cut along this avenue until it joins the Banff highway.

Bridge at Chestermere

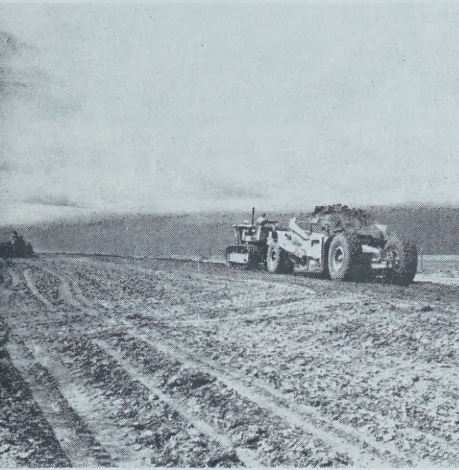
This new route will necessitate the construction of a bridge over the irrigation canal at the outlet of Chestermere Lake, a grade separation, two bridges and a creek diversion within the valley of Nose Creek. The grade separation will carry the highway over the valley road, and two three-span steel girder bridges will cross the C.P.R. line and Nose Creek.

The only setback that may be experienced in the construction of the highway is the possibility of slow delivery of structural steel.

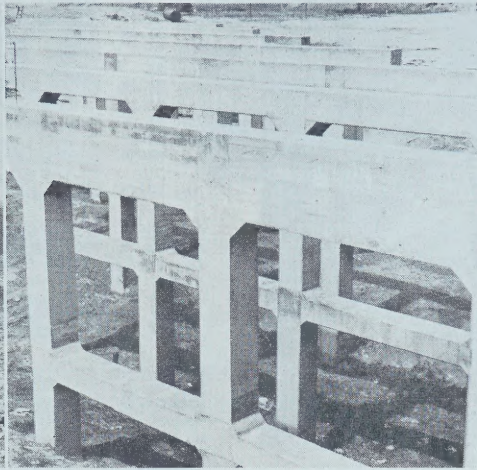
When completed, the Alberta portion of the Trans-Canada Highway will compare with any highway in Canada. The use of the maximum width of roads and bridges will provide ample space for the future increase of tourist and business traffic.

A Within Our Borders Picture Page

Alberta Section Of Trans - Canada Highway Taking Shape



New route for highway is constructed north of Medicine Hat.



Concrete pillars are completed on new overpass near Dunmore.



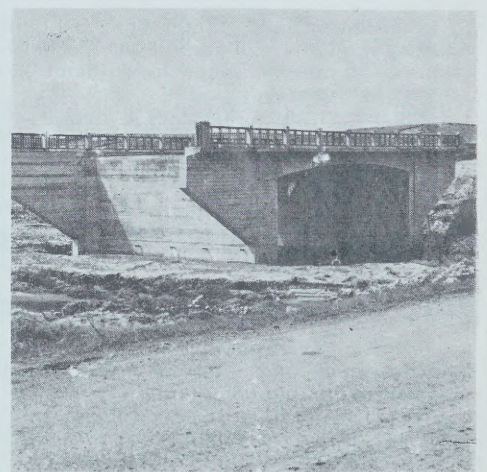
Grade separation will carry new road over Highway No. 3 at Medicine Hat.



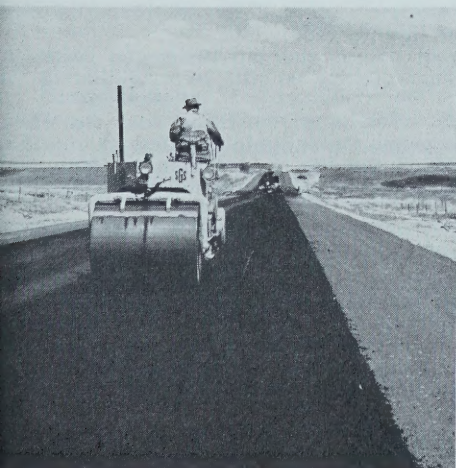
Ditch work is completed before hardsurfacing near Strathmore.

In southern Alberta, highway crews are busy at work on the Alberta section of the Trans-Canada Highway which will travel between Dunmore and Banff, passing through the cities of Medicine Hat and Calgary.

The Alberta Government is paying half the cost of construction of the Alberta section of the highway as well as all the costs of office work and present and future maintenance work. Sixty miles of the highway which pass through Banff National Park will be constructed entirely by the Government of Canada.



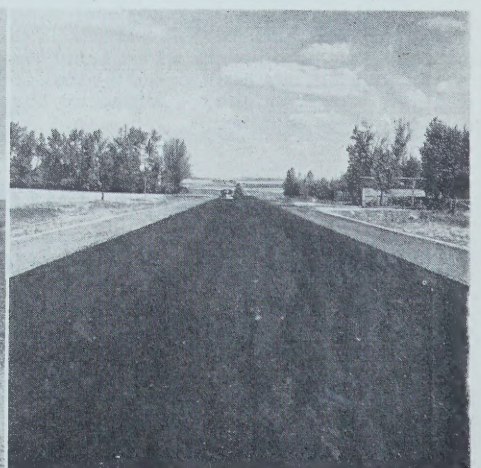
Earth grades will carry the highway over this new bridge near Dunmore.



Roller packs fresh asphalt on new portion of highway near Gleichen.



Highway near Strathmore is prepared for hardsurfacing.



Completed stretch of Trans-Canada Highway near Gleichen.

The Changing Face Of Alberta



(Airview Photo)

Lethbridge, centre of a farming region made rich by the miracle of irrigation, is shown here from the air. The areas of expansion are identified by the lack of trees but new trees are being planted each year to cover the prairie land.

REFRIGERATION COURSE

A complete eight month course in refrigeration will be provided by the Provincial Institute of Technology and Art, beginning Sept. 29. The previous course in refrigerator installation and servicing was four months.

The longer course will allow students with no previous electrical experience to take the course as electricity will be included in the studies.

Hunters Offered Bounties For Cougars And Wolves

Bounties have been placed on two of Alberta's worst predators—timber wolves and cougars—in an attempt to halt their attacks on livestock and big game.

Residents of Alberta may collect a \$15 bounty on cougars killed within the Province, exclusive of national parks, during the fiscal year ending March 31, 1953.

The bounties on timber wolves have been divided into two classes. From April 1 to Sept. 30, a \$15 bounty will be paid for every timber wolf or pup killed in Alberta, outside of national parks. From Oct. 1 to March 31, 1953, when the pelt will be more valuable to the trapper, the bounty will be \$12.

When a pelt is delivered to a game or forest officer, R.C.M.P., justice of the peace or a commissioner of oaths, both ears are split from tip to base and the pelt returned to the applicant. Both ears must be intact on a pelt for which bounty is claimed.

In addition, information as to the time and the place of trapping or killing also is required. Licensed fur buyers are restricted from collecting these bounties.

Second Seed Control Area Established At Peers

A seed control area has been established in the Peers district, west of Edmonton. This is the second area of this type established in Alberta under the Seed Control Areas Act.

The Peers district is known for the high quality of its seed potatoes and the crop has been unusually free from disease in past years. To keep out potato disease, the growers of the Peers district have organized a seed control area and set up regulations under which only Foundation or Certified seed may be planted.

The first seed control area was established in 1948 north of Wanham by a group of veterans who banded together to preserve the purity of their grass and legume seed crops.

COMING EVENTS

During the next few months Alberta will be the scene of many events of provincial, national and international interest. Within Our Borders will list all COMING EVENTS from May through September. Information should be forwarded to Within Our Borders, Legislative Buildings, Edmonton.

July 15-16	Cardston Rodeo	CARDSTON
July 14-19	Edmonton Exhibition	EDMONTON
July 16	Annual Celebration	KILLAM
July 17-20	Banff Indian Days	BANFF
July 17-19	Medicine Hat Stampede	MEDICINE HAT
July 21-23	Lloydminster Fair	LLOYDMINSTER
July 23	Dog Pound Stampede	DOG POUND
July 23	Gem Stampede	GEM
July 23-24	Benalto Stampede	BENALTO
July 23-25	Lethbridge Fair	LETHBRIDGE
July 24-26	Vermilion Fair	VERMILION
July 26-27	International Peace Park Ceremony	WATERTON
July 28-30	Benevolent and Protective Order of Elks Convention	Elks Hall CALGARY
July 28-30	Royal Order of Purple	Legion Hall CALGARY
July 28-30	Vegreville Fair	VEGREVILLE
July 29-30	Wetaskiwin Fair	WETASKIWIN
July 31-Aug. 2	Red Deer Fair	RED DEER
August 4-6	Camrose Fair	CAMROSE
August 5-6	Lamont Fair	LAMONT
August 5-6	Grande Prairie Fair	GRANDE PRAIRIE
August 6-16	Canadian Council of the Blind	Palliser Hotel CALGARY
August 6-7	Donnelly-Falher, Girouxville Fair	FALHER
August 7	Athabasca Fair	ATHABASCA
August 8	Battle River Fair	BATTLE RIVER
August 8-9	Olds Fair	OLDS
August 10-13	Kiwanis Convention	LETHBRIDGE
August 13	Goose Creek Fair	GOOSE LAKE
August 13-14	Westlock Fair	WESTLOCK

Properly Bred Replacements Will Improve Dairy Herds

Raising young stock for cow replacements has proved to be the first and most important step in the prevention of cattle diseases, according to R. P. Dixon, Supervisor of Dairy Herd Improvement for the Alberta Department of Agriculture.

The average life of cows in herds which raise replacements is approximately five years while the average life of cows in herds for which replacements are purchased is 2.5 years.

Dairymen can improve the quality of their cows by raising their own replacements through a sound breeding program. Proper selection of heifers to raise as replacements will increase milk production on most farms.

Growing heifers require good feed and care. Because heifers less than a year old cannot make full use of pasture, they should be fed two to four pounds of grain daily and allowed access to hay from eight months of age until they are a year old. Yearlings on good pasture need no supplementary feeding. Ample water, free access to a mixture of equal parts of bone meal or other mineral supplement, and salt are essential.

Schools Of Agriculture To Open Term Oct. 21

The Alberta Schools of Agriculture and Home Economics at Olds, Vermilion and Fairview will open for the 1952-1953 term on Oct. 21 and close on April 1, 1953.

The regular two-year course and the two-in-one course in both agriculture and home economics will be available at the three schools.

Prospective students must be at least 16 years old. There are no academic requirements for students enrolling in the two-year course but a Grade 8 standing is desirable. Students who have completed 70 high school credits may enroll in the one-year two-in-one course.

Applications for entry to the schools should be made as early as possible to the school principals.

"Within Our Borders" is a publication designed to acquaint the people of the Province with the administration and services of the Alberta Government.

It is believed the many and varied services of the Government will be effective in the degree they are known and used.

Any material used is for immediate republication. All photographs used are Alberta Government Photographs unless otherwise specified.

Correspondence should be addressed to "Within Our Borders," Legislative Buildings, Edmonton.



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